

L 60853-65

ACCESSION NR: AP5019650

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, NP

NO REF SOV: 001

OTHER: 003

ATD PRESS: 4063

Card

*jlk*  
3/3

L 60853-65

ACCESSION NR: AP5019650

only some 10--15%. Sitals S-1214 and Zh-3 can be used for parts exposed to sliding friction in an intensive neutron flux. Significant changes in microhardness take place in boron-containing sital IV-23 on irradiation. The nature of changes in dielectric properties of the sitals investigated differs, depending on the irradiation dose (measurements were taken at  $10^5$ ,  $10^6$  and  $10^7$  cps). While the sense of the change remains the same at all frequencies, the magnitude of the changes at higher frequencies decreases; sital IV-23 shows a high degree of stability. Unlike sital S-343, sital IV-23 retains the induced changes in microhardness, even on annealing above 500C. This indicates the irreversible nature of the changes. Most of the radiation-induced changes in IV-23 are localized in the surface layer, the site of the majority of nuclear events. The results obtained are preliminary in character; clarification of the mechanism of radiation-induced changes will involve comparison of changes in a number of properties, among them elasticity, mechanical strength and electrical conductivity. A higher density of nuclear events can be achieved by increased doses of irradiation, or by incorporation in the sitals of isotopes with higher thermal-neutron capture cross sections, e.g., by the use of boron-containing starting materials enriched with  $B^{10}$ . Any evaluation of the radiation stability of sitals must be made with a given set of functional requirements in mind. Orig. art. has: 5 figures and 2 tables. [VS]

Card 2/3

L 50853-65 EWT(1)/EWP(s)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EPA(w)-2/ 38  
EWP(j)/T/EEC(b)-2/EWP(b) IJP(c) WW/GG/RM/WH 37  
B

ACCESSION NR: AP5019650

UR/0072/65/000/008/0015/0017  
666.11.065.5

AUTHOR: Brekhovskikh, S. M. (Candidate of technical sciences); Grinshteyn, Yu. L. (Engineer)

19  
TITLE: The effect of neutron irradiation on crystalline vitreous materials

SOURCE: Steklo i keramika, no. 8, 1965, 15-17

TOPIC TAGS: radiation damage, crystal defect, sital, radiation resistance, thermal neutron, F center

21 6 6  
ABSTRACT: Crystalline samples of sitals S-343, S-1214, Zh-3, and IV-23 were sealed in aluminum containers and exposed to fluxes of  $10^{16}$ ,  $10^{18}$  and  $10^{19}$  thermal neutrons/cm<sup>2</sup> in a reactor. The temperature of the reactor cavity remained below 400. The irradiated samples were tested for density, hardness, and dielectric properties. The opaque white sitals turned various shades of grey and brown on irradiation; the intensity of coloration increased with irradiation. The transparent sital S-343 turned blue with complete loss of transparency at  $10^{18}$  neutrons/cm<sup>2</sup>. Except for sital IV-23, whose density increased at  $10^{18}$  neutrons/cm<sup>2</sup>, no noticeable changes in density were observed. The microhardness of the majority of the sitals changed

Card 1/3

L 11846-66

ACC NR: AT6000506

additional crystallization of quartz, small doses of neutrons reduce the amount of the basic crystallization phase, probably causing some crystallization of silicon dioxide. A brief attempt is made to explain this behavior. Orig. art. has: 3 figures.

SUB CODE: 11, 20 / SUBM DATE: 22May65 / ORIG REF: 005

jw  
Card 2/2

L 11846-66 EWT(m)/EPF(n)-2/EWP(e)/EWP(b) GG/WH/GS

ACC NR: AT6000506

SOURCE CODE: UR/0000/65/000/000/0365/0368

AUTHOR: Brekhovskikh, S. M.; Grinshteyn, Yu. L.; Landa, L. M.; Chubkina, N. I.

ORG: None

TITLE: The influence of nuclear radiation on the structure and phase transition in glassceramics

SOURCE: Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu. 4th, Leningrad, 1964. Stekloobraznoye sostoyaniye (Vitreous state); trudy soveshchaniya, Leningrad, Izd-vo Nauka, 1965, 365-368

TOPIC TAGS: irradiation effect, crystallization, ceramics, nuclear radiation, ionizing radiation, glass product, gamma ray, neutron

ABSTRACT: Glassceramics, representing a mixture of at least two phases, one of which is metastable, is quite susceptible to induced crystallization under the influence of ionizing radiation. The authors investigated  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{SiO}_2$  systems with a composition close to spondumene, crystallized at  $710^\circ$ . Transparent samples were irradiated by  $10^2$  to  $10^5$  rad doses of  $^{60}\text{Co}$   $\gamma$ -rays and by  $10^{16}$  to  $10^{19}$  neutr/cm<sup>2</sup> of thermal neutrons. Results are in the form of x-ray ionization curves with the curves of nonirradiated  $\beta$ -eucryptite or eucryptite-like solid solution serving as the standard. Results show that whereas gamma rays cause an

Card 1/2

BREKHOVSKIKH, S. M.; GRINSHTEYN, Yu. L.; LANDA, L. M.; CHUBAKINA, N. I.

"The effect of nuclear radiations on the structure and phase transitions in  
sitals."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad,  
16-21 Mar 64.

Glass production under the action of gamma rays

S/072/63/000/004/002/005  
A051/A126

the radiation internal heating of the micro-volume of the substance takes place owing to the interaction of the freed electrons with atom and ion shells. A study of the mass activation with preliminary gamma irradiation is recommended as it is thought to be important for the production of new types of glass. There are 3 figures.

Card 2/2

S/072/63/000/004/002/005  
A051/A126

AUTHORS: Brekhovskikh, S. M., Candidate of Technical Sciences, Grinshteyn,  
Yu. L., Engineer

TITLE: Glass production under the action of gamma rays

PERIODICAL: Steklo i keramika, no. 4, 1963, 9 - 10

TEXT: A study of optical property changes in glass, under the action of  $\text{Co}^{60}$  gamma radiation, was made. The effect of the gamma rays on the kinetics of glass manufacturing processes was investigated. The degree of purification of the molten glass was taken as the criterion for evaluating the rate of the processes occurring in the molten mass. A five-component industrial glass (in % by weight): 71.3  $\text{SiO}_2$ , 15.5  $\text{Na}_2\text{O}$ , 7  $\text{CaO}$ , 4.3  $\text{MgO}$ , 2.04  $\text{Al}_2\text{O}_3$ , was investigated. It was found that the gamma radiation has an effect only on the processes which occur in the first stages of the production (during the first 20 min in the experiments), and which are accompanied primarily by the emission of gas. One of these processes is said to be the possible acceleration of thermal dissociation of carbonates included in the composition of the mass, since under the effect of

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L 61723-65

ACCESSION NR: AP5018931

hardness have different characteristics for small and for large doses. These changes and changes in other parameters measured (density, mechanical strength, dielectric properties, coefficient of thermal expansion, and phase composition) often exhibit extrema at doses which depend on the composition of the material. The authors also observed the so-called "neutron hardening" of pyrocerams, which might cause destruction of the sample. They assume that the changes in coefficients of thermal expansion are due not only to the changes in phase composition but also to the appearance of stresses. In conclusion, the radiation effects on sital IV-23 are discussed on the basis of the theory of thermal maxima. Orig. art. has: 4 formulas, 5 figures, and 1 table. [08]

ASSOCIATION: none

SUBMITTED: 11Feb65

ENCL: 00

SUB CODE: MT, NP

NO REF SOV: 000

OTHER: 005

ATD PRESS: 4061

Card

2/2

L 61723-65 EWP(e)/EPA(s)-2/EMI(m)/EPF(c)/EWP(1)/EPF(n)-2/EPA(w)-2/EWP(j)/T/EWP(b)  
Pc-1/Pq-4/Pr-4/Pt-7/Pu-4 WW/GG/RM/WH

ACCESSION NR: AP5018931

UR/0363/65/001/006/0947/0951  
666.1:542.65

52  
B

AUTHOR: Brekhovskikh, B. M.; Grinshteyn, Yu. L.

TITLE: The effect of thermal neutron exposure on certain properties of heat-resistant pyrocerams.

SOURCE: AN SSSR. Investiya. Neorganicheskiye materialy, v. 1, no. 6, 1965, 947-951, and insert facing p. 858

TOPIC TAGS: neutron bombardment, pyroceram, pyroceram radiation damage, pyroceram strength, pyroceram hardness, thermal expansion, dielectric constant, thermal neutron, neutron hardening

ABSTRACT: This is a report on the first attempts to determine the effects of radiation on various pyrocerams, including heat-resistant. Samples, enclosed in aluminum containers, were subjected to doses varying from  $10^{16}$  to  $10^{19}$  thermal neutrons/cm<sup>2</sup> within the experimental channels of nuclear reactors at no more than 400°C. Tests showed that pyroceram (sital) IV-23 can be used within neutron fields up to integral fluxes of  $5 \cdot 10^{18}$  thermal neutrons/cm<sup>2</sup>. Sital Zh-3 remained undamaged even after integral doses of  $10^{19}$  thermal neutrons/cm<sup>2</sup>. The observed changes in micro-

Card 1/2

L 21918-66

ACC NR: AP6014456

motor activity. Duration of the effect was less prolonged than with anode stimulation, except in individual cases. With both types the latent period was 5 seconds. The author discusses various factors associated with the mechanics of the experiment that probably influenced the pattern of the results, though not the basic conclusion that the polarity of the cerebral stimulus is significant. This is supported by the low percentage of cases in which anode stimulation led to a decrease in the amplitude of stomach contractions. This paper was presented by Active member, AMN SSSR, V. V. Parin. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06 / SUBM DATE: 13Jul63 / ORIG REF: 024

Card 2/2 nst

L 21918-66

ACC NR: AP6014456

SOURCE CODE: UR/0219/65/059/001/0015/0019

AUTHOR: Grinshteyn, Yu. A.--Grinshtein, Yu. A.

ORG: Pedagogical Institute, Borisoglebsk (Pedagogicheskiy institut)

TITLE: Effect of direct current stimulation of the cerebral cortex on the motor activity of the stomach

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 59, no. 1, 1965, 15-19

TOPIC TAGS: digestive system, cerebral cortex, electrophysiology, dog

ABSTRACT: A silver electrode was implanted 12-20 days before the experiment in the cerebral cortex of 4 dogs with gastric fistulae. Before the experiment the stomach was washed with warm water and a rubber balloon was inserted and filled with 150-300 ml of water; the mouth of the balloon was attached to measuring instruments. Moderate extension of the stomach walls with the balloon caused energetic muscular contractions (4-6 minutes) soon after application of the stimulus. Intense stomach contractions lasted 3-4 hours. During this period the cerebral cortex was stimulated with d-c current. The effect of the stimulation depended on the polarity of the stimulus. In 63% of the experiments anode stimulation with d-c current resulted in an increase in the amplitude of stomach contractions; in 4% the amplitude was reduced; and in 33% the stomach's motor activity was unchanged. Alteration of the stomach's motor activity was prolonged, sometimes even until the following day. Cathode stimulation of the cerebral cortex frequently suppressed stomach activity; in only 9% of the experiments did it stimulate

Card 1/2

UDC: 612.337-063: 612.825.014.424

GRINSHTEYN, Yu. A. Cand Med Sci-(diss) "On the problem of the effect of cranial traumas, and changes in the functional condition of certain sections of the cerebrum, <sup>upon</sup> <sup>n-</sup> <sup>stimulation</sup> on stomach movements induced by ~~irritation~~ of mechanoreceptors." Stalingrad, 1955  
11 pp 20 cm. (Stalingrad Med Inst), 55 copies  
(KL, 7-57, 109)

65

ACC NR: AP6029022

SOURCE CODE: UR/0413/66/000/014/0024/0024

INVENTOR: Soborovskiy, L. Z.; Grinshteyn, Ye. I.; Bruker, A. B.

ORG: none

TITLE: Preparation of secondary 1-hydroxyfluoroalkyl alkyl phosphines. Class 12,  
No. 183748

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 24

TOPIC TAGS: ~~secondary hydroxyfluoroalkyl alkyl phosphine~~, fluoroalkyl ketone,  
primary phosphine, organic phosphorus compound, fluorinated organic compound, ketone

ABSTRACT: In the proposed method, secondary 1-hydroxyfluoroalkylalkylphosphines  
are obtained by the reaction of primary phosphines with fluoroalkyl  
ketones. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 14Sep64/

Card 1/1

UDC: 547.419.1.07

L 06507-67 EWP(j)/EWT(m) RM/WW  
ACC NR: AP7000485

SOURCE CODE: UR/0079/66/036/006/1138/1141

GRINSHTEYN, Ye. I., BRUKER, A. B., SOBOROVSKIY, L. Z.

"Synthesis of Organophosphorus Compounds Starting with Phosphorus Hydrides.  
VI. Reactions of Trifluoroacetone with Phosphorus Hydrides"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 6, 1966, pp. 1138-1141

TOPIC TAGS: alkylphosphine, fluorinated organic compound, organic synthetic process

Abstract: The reaction of 1, 1, 1-trifluoroacetone with phosphine, methyl- and dimethylphosphine was carried out, and the corresponding 1-hydroxy-2,2,2-trifluoroisopropylphosphines were obtained and characterized. The reaction of trifluoroacetone with phosphines, similar to that of hexafluoroacetone with phosphorus hydrides, was found to be limited to the replacement of only one hydrogen atom on the phosphorus by the 1-hydroxy-2,2,2-trifluoroisopropyl radical. Some derivatives of the 1-hydroxy-2,2,2-trifluoroisopropylphosphines were produced and characterized. The primary phosphine 1-hydroxy-2,2,2-trifluoroisopropylphosphine was converted to 1-hydroxy-2,2,2-trifluoroisopropylphosphinic acid by boiling with excess hydrogen peroxide in aqueous solution, to the corresponding ester by treatment with acetylchloride, and to 1-hydroxy-2,2,2-trifluoroisopropyl-di(hydroxymethyl)phosphine by hydroxymethylation with formaldehyde in aqueous solution in the presence of cadmium chloride. The tertiary phosphine 1-hydroxy-2,2,2-trifluoroisopropyl-di(hydroxymethyl)phosphine was oxidized to the corresponding phosphine oxide. The secondary and tertiary phosphines synthesized exhibited analogous reactions. The IR spectra were analyzed by S. S. Dubov and V. V. Fedotov. [JES, 37, 23]

SUB CODE: 07 / SUBM DATE: 08Mar65

Card 1/1 m 26

UDC: 547.438.1

0923

1200

L 52108-65 EPT(c)/EPR/EWP(j)/ENA(c)/ENT(m) Pc-4/Pr-4/Ps-4 RPL WW/RM

ACCESSION NR: AP5015240

UR/0286/65/000/009/0022/0022

AUTHORS: Grinshteyn, Ye. I.; Bruker, A. B.; Soborovskiy, L. Z.

TITLE: A method for obtaining primary 1-hydroxyfluoroalkylphosphines. Class 12,  
No. 170498

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 22

TOPIC TAGS: hydroxyfluoroalkylphosphine, fluoroalkyl ketone, hydrogen phosphide

ABSTRACT: This Author Certificate presents a method for obtaining primary 1-hydroxyfluoroalkylphosphines. Fluoroalkyl ketones are interacted with hydrogen phosphide while being warmed to 50-110C.

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta khimicheskoy promyshlennosti pri gosplane SSSR (Enterprise of the State Committee of the Chemical Industry at the Gosplan SSSR)

SUBMITTED: 20Mar64

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 1/1 *7mb*



L 13351-63

ACCESSION NR: AP3002625

carbon atom of the carbonyl group to the electron-donor phosphorus atom in the phosphine molecule with the subsequent rearrangement of the intermediate complex. The theory is advanced that, in the reactions investigated, the increase in reactivity of phosphines substituted by methyl groups is connected with the fact that the weakly localized electron pair of the C-H bond in the methyl group at phosphorus reacts with 3rd-orbitals of the latter. This increases the electron-donor properties of phosphorus and hence facilitates the reaction with the electrophilic atom of the carbonyl group. Orig. art. has: 2 tables and 1 formula.

ASSOCIATION: none

SUBMITTED: 22Jun62

DATE ACQ: 20Jul63

ENCL: 00

SUB CODE: CH

NO REF SOV: 003

OTHER: 004

Card

2/2

13351-63 EMP(j)/EPF(c)/EWT(m)/BDS ASD/ESD-3 Pc-4/Pr-4 RM/WW

ACCESSION NR: AP3002625

8/0079/63/033/006/1919/1923

AUTHOR: Bruker, A. B.; Baranavev, M. K.; Grinshteyn, Ye. I.; Novoselova, R. I.; Prokhorova, V. V.; Soborovskiy, L. Z.

TITLE: Mechanism and kinetics of hydroxymethylation of phosphines

SOURCE: Zhurnal obshchey khimii, v. 33, no. 6, 1963, 1919-1923

TOPIC TAGS: hydroxymethylation, methylation, phosphine, electron-donor properties, electron-donor, formaldehyde, activation energy, phosphorus, carbon

ABSTRACT: The kinetics of reactions of hydrogen phosphide, ethyl phosphine, methyl phosphine, methyl-ethyl phosphine and dimethyl phosphine with paraformaldehyde without using special catalysts and solvents has been investigated. The activation energy of the reaction was determined. It was found that according to the values of the energy of activation in the reaction of paraformaldehyde, the studied phosphines follow the order: PH sub 3 less than C sub 2 H sub 5 PH sub 2 much less than CH sub 3 PH sub 2 less than CH sub 3 (C sub 2 H sub 5) PH much less than (CH sub 3) sub 2 PH. The proposed mechanism was confirmed, according to which the reaction proceeds with the electrophilic attack by the

Card 1/2

L 51812-56

ACC NR: A66021400

phosphine, beta-acetoxyethyltrimethylphosphonium iodide, and beta-hydroxyethyl-dimethylphosphine oxide, were produced. Ethylene oxide did not react with dimethylphosphine in the absence of moisture; in the presence of water the reaction product was not a tertiary beta-hydroxydimethylphosphine, but bis-(beta-hydroxyethyl)-dimethyl-phosphonium hydroxide. The infrared spectrum was done by S. S. Dubov and V. V. Fedotova. [JPRS]

SUB CODE: 07 / SUBM DATE: 16Nov64 / ORIG REF: 004

Card 2/2

L 31812-66 EWT(m)/EWP(j) RM  
 ACC NR: AF6021680 SOURCE CODE: UR/0079/66/036/003/0484/0488

AUTHOR: Bruker, A. B.; Grinshteyn, Ye. I.; Soborovskiy, L. Z.

ORG: none

TITLE: Synthesis of organophosphorus compounds on the basis of phosphorus hydrides.  
 IV. Synthesis of beta-hydroxyethylalkylphosphines and beta-hydroxyethyldialkylphosphines and their derivatives

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 484-488

TOPIC WORDS: organic phosphorus compound, chemical synthesis, nonmetallic organic derivative, alkylation, alkylphosphonium salt, alkylphosphine, alkylphosphonium hydroxide

ABSTRACT: Primary and secondary phosphines, containing the beta-hydroxyethyl radical, were alkylated with alkyl halides, resulting in the production of the corresponding beta-hydroxyethylalkylphosphonium and beta-hydroxyethyldialkylphosphonium halides, decomposition of which with alkali leads to beta-hydroxyethylalkylphosphines and beta-hydroxyethyldialkylphosphines. Beta-hydroxyethylalkylphosphines and beta-hydroxyethyldialkylphosphines were also produced by reaction of ethylene oxide with alkylhydrophosphides and dialkylphosphides of the alkali metals. Previously undescribed compounds. Derivatives of beta-hydroxyethyldimethylphosphine: beta-acetoxyethyldimethyl-

Card 1/2

DOC: 546.381.1:947.433.1

L 06508-67  
ACC NR: AP7000484

presence of catalytic amounts of cadmium chloride yielded 1-hydroxyhexafluoroisopropoxydimethylphosphine. 1-Hydroxyhexafluoroisopropoxydimethylphosphine was readily oxidized by atmospheric oxygen to the corresponding oxide. 1-Acetoxyhexafluoroisopropoxydimethylphosphine was obtained from the action of acetylchloride upon 1-hydroxyhexafluoroisopropoxydimethylphosphine. The reaction of hexafluoroacetone with phosphines was extended to arsines: the reaction of hexafluoroacetone with arsine yielded the previously unknown 1-hydroxyhexafluoroisopropylarsine, the first representative of primary arsines with a hydroxyl group in the alpha-position to the arsenic atom. The IR spectra were analyzed by S. S. Dubov and V. V. Fedotov. [JPRS: 37,023]

SUB CODE: 07 / SUBM DATE: 08Mar 5 / ORIG REF: 013 / OTH REF: 007

Card 2/2 *LS*

L 06508-67 EWT(m)/EWP(j) WW/RM  
 ACC NR: AP7000484

SOURCE CODE: UR/0079/66/036/006/1133/1138

BRUKER, A. B., GRINSITSEYN, Ye. I., SOBOROVSKIY, L. Z.

"Synthesis of Organophosphorus Compounds Starting with Phosphorus Hydrides.  
 V. Reaction of Hexafluoroacetone with Phosphorus and Arsenic Hydrides"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 6, 1966, pp 1133-1138

TOPIC TAGS: alkylphosphine, fluorinated organic compound  
 Abstract: It was found that phosphine reacts readily with hexafluoroacetone to form 1-hydroxyhexafluoroisopropylphosphine, which is the first representative of the group of primary alpha-hydroxyalkylphosphines, a new group of organophosphorus compounds containing an alpha-hydroxyfluoroalkyl radical on the phosphorus atom, together with hydrogen atoms. The reaction of hexafluoroacetone with dimethylphosphine leads to 1-hydroxyhexafluoroisopropyldimethylphosphine, which has not been described previously. A mechanism is proposed for the indicated processes. Some conversions of the 1-hydroxyhexafluoroisopropylphosphines synthesized were studied, resulting in a number of previously unknown derivatives of these substances. Reaction of 1-hydroxyhexafluoroisopropylphosphine with an aqueous solution of formaldehyde in the presence of catalytic cadmium chloride yields 1-hydroxyhexafluoroisopropyldi(hydroxymethyl)phosphine; the latter is oxidized to 1-hydroxyhexafluoroisopropyldi(hydroxymethyl)phosphine oxide. Treatment of the secondary phosphine 1-acetoxyhexafluoroisopropylmethylphosphine with aqueous formaldehyde in the

Card 1/2

UDC: 547.438.1

0923

1198

L 31276-66 EWT(m)/EWP(j) RM SOURCE CODE: UR/0079/66/026/002/0302/0306  
 ACC NR: AP6022800  
 AUTHOR: Grinshteyn, Ye. I.; Bruker, A. B.; Soborovskiy, L. Z. 43  
 ORG: none  
 TITLE: Synthesis of organophosphorus compounds based on phosphorus hydrides.  
 III. Reactions of ethyl-, diethyl-, and methylethylphosphines with paraformaldehyde  
 SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 302-306  
 TOPIC TAGS: chemical synthesis, hydride, formaldehyde, oxide formation, hydrogen peroxide, halogenated organic compound, organic salt, coordination chemistry, alkylphosphine, halide  
 ABSTRACT: Di(hydroxymethyl)ethylphosphine, hydroxymethyldiethylphosphine, and hydroxymethylmethylethylphosphine were produced by reaction of paraformaldehyde with phosphines under pressure. Di(hydroxymethyl)ethylphosphine oxide was produced for the first time by oxidation of di(hydroxymethyl)ethylphosphine with hydrogen peroxide; hydroxymethyldimethylphosphine oxide was produced analogously. Reaction of the hydroxymethylphosphines with alkyl halides yielded the corresponding quaternary phosphonium salts: tri(hydroxymethyl)methylphosphonium iodide, di(hydroxymethyl)dimethylphosphonium iodide, hydroxymethyltrimethylphosphonium iodide, hydroxymethyltrimethylphosphonium chloride, and hydroxymethylmethylethyl-n-propylphosphonium bromide. The hydroxymethylphosphines in alcohol solution readily formed coordination compounds with mercuric chloride. Tri(hydroxymethyl)phosphine was produced from hydrogen phosphide and paraformaldehyde under slight excess pressure. The basicity of the phosphines was found to increase in the series  $(\text{HOCH}_2)_3\text{P} < (\text{HOCH}_2)_2\text{PCH}_3 < \text{HOCH}_2\text{P}(\text{CH}_3)_2$ . The IR spectra were done by S. S. Dubov and V. V. Fedotova. Orig. art. has: 1 table. [JPRS]  
 SUB CODE: 07 / SUBM DATE: 22Oct64 / ORIG REF: 005 / OTH REF: 005  
 Card 1/1 UDC: 547.241: 547.438.1 0779

Oxymethylation of phosphine and its...

28649 S/020/61/139/006/C15/022  
B103/B101

than  $\text{PH}_3$ . This is due to the strengthening of the electrodonor properties of phosphorus in the order  $\text{PH}_3 < \text{CH}_3\text{-PH}_2 < (\text{CH}_3)_2\text{PH}$ . The authors' method makes it possible to synthesize various hydroxyalkyl-substituted phosphines by using different alkyl and aryl phosphines as well as carbonyl compounds. There are 7 non-Soviet references. The three most important references to English-language publications read as follows: Ref. 2: A. Hoffman, J. Am. Chem. Soc., 52, 2995 (1930); Ref. 3: W. A. Peeters et al., J. Am. Chem. Soc., 77, 3923 (1955); Ref. 6: N. B. Fomina, Chem. and Ind., 1955, No. 29,900.

PRESENTED: March 16, 1961, by I. L. Knunyants, Academician

SUBMITTED: March 15, 1961

Card 4/4



28649

S/020/61/139/006/015/022

B103/B101

Oxymethylation of phosphine and its...

phosphine reacts with paraformaldehyde more readily, i.e., more rapidly and at lower temperatures than  $\text{PH}_3$ . It forms di-(hydroxymethyl)-methyl

phosphine:  $\text{CH}_3\text{PH}_2 + 2\text{CH}_2\text{O} \rightarrow (\text{HOCH}_2)_2\text{PCH}_3$ . This compound, which boils at  $115^\circ\text{C}$ , has not yet been described in the literature. With  $\text{H}_2\text{O}_2$  it is oxidized to a new oxide:  $(\text{HOCH}_2)_2\text{PCH}_3 + \text{H}_2\text{O}_2 \rightarrow (\text{HOCH}_2)_2\text{P}(\text{O})\text{CH}_3$ . X

Dimethyl phosphine reacts with paraformaldehyde even more readily, and forms dimethyl hydroxymethyl phosphine:  $(\text{CH}_3)_2\text{PH} + \text{CH}_2\text{O} \rightarrow (\text{CH}_3)_2\text{PCH}_2\text{OH}$ .

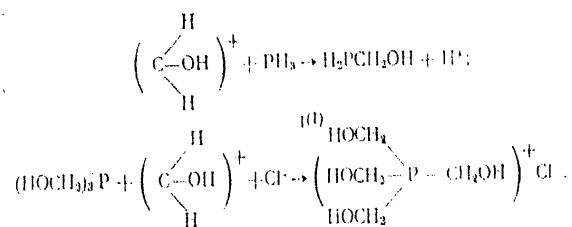
This compound belongs to a new type of monovalent alcohols with an oxygen-phosphorus radical at the C atom which is bonded with hydroxyl. The fact that  $\text{PH}_3$  and organic phosphines react with formaldehyde even in the absence of a proton source is ascribed to the circumstance that this reaction is caused by an electrophilic attack of the C atom of the carbonyl group to the P atom of the phosphine molecule, thus forming hydroxymethyl phosphine. The latter compound is converted into di- and tri-(hydroxymethyl)-derivatives. This hypothesis explains the fact that methyl and dimethyl phosphines react with paraformaldehyde more readily

Card 3/4

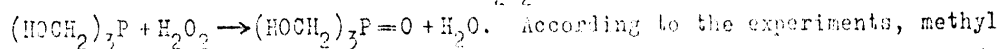
28649

S/020/61/139/006/015/022  
B103/B101

Oxymethylation of phosphine and its...



The authors, however, found that formaldehyde may react with phosphines according to another mechanism, derivatives of trivalent phosphorus being formed. Paraformaldehyde, for example, reacts with  $\text{PH}_3$  (molar ratio 3:1) at 90-100°C, and forms tri-(hydroxymethyl)-phosphine in a high yield:  
 $3 \text{ CH}_2\text{O} + \text{PH}_3 \rightarrow (\text{HOCH}_2)_3\text{P}$ . From this product, the authors obtained an oxide under the action of a dilute  $\text{H}_2\text{O}_2$  solution:



Card. 2/4

53630

2209, 2409, 2915

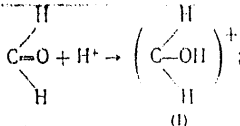
28649 S/020/61/139/006/015/022  
B103/B101

AUTHORS: Grinshteyn, Ye. I., Bruker, A. B., and Soborovskiy, L. Z.

TITLE: Oxymethylation of phosphine and its derivatives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 6, 1961, 1359-1362

TEXT: So far, it has been assumed that  $\text{PH}_3$  as well as alkyl and aryl phosphines react with formaldehyde only with the participation of  $\text{HCl}$  or several salts. For this reaction (Ref. 6, see below) a mechanism has been suggested, according to which this process takes place via the intermediate formation of a formaldehyde cation (I). (I) reacts with a  $\text{PH}_3$  molecule where a proton is split off. First, a monohydroxymethyl derivative is formed and then di- and tri-(hydroxymethyl)-phosphines and tetrahydroxymethyl phosphonium chloride:



Card 1/4

ACC NR: AP6029022

SOURCE CODE: UR/0413/66/000/014/0024/0024

INVENTOR: Soborovskiy, L. Z.; Grinshteyn, Ye. I.; Bruker, A. B.

ORG: none

TITLE: Preparation of secondary 1-hydroxyfluoroalkyl alkyl phosphines. Class 12, No. 183748

SOURCE: Izobretye prom obraz tova zn, no. 14, 1966, 24

TOPIC TAGS: ~~secondary hydroxyfluoroalkyl alkyl phosphine~~, fluoroalkyl ketone, primary phosphine, organic phosphorus compound, fluorinated organic compound, ketone

ABSTRACT: In the proposed method, secondary 1-hydroxyfluoroalkylalkylphosphines are obtained by the reaction of primary phosphines with fluoroalkyl ketones. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 14Sep64/

Card 1/1

UDC: 547.419.1.07

[illegible][illegible]

1. Northwesterly Inflowing Equatorial Current

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000616900029-6

GRINSHTEYN, Ye. A., Cand Med Sci -- (diss) "Agglutination reaction in diphtheria." Gor'kiy, 1960. 16 pp; (Gor'kiy State Medical Inst im L. M. Kirov); 300 copies; price not given; (Kb, 28-60, 164)

GRINSHTEYN, Ya. G.

Instruments and devices for an active control in the assembly  
of watches. Priborostroenie no. 4:17-21 Ap '64. (MIRA 17:5)

GRINSHTEYN, Ya. G.; DAVIDOVICH, V.S.; SHIRMAN, A.M.

New conveyer for assembling watches. Priboroostroenie no.5:17-19  
My '61. (MIRA 14:5)

(Clockmaking and watchmaking)  
(Assembly line methods)



GRINSHTAYN, Ya. A.; CHERNOV, N.V.

The S-181 automatic nut-cutting machine. Stan. 1 instr. 28 no.5:  
18-19 My '57. (MLRA 10:6)  
(Bolts and nuts) (Screw cutting machines)

GRINSHTEYN, Ya.

With the radio operators and meteorological observers. Prof.-tekh.  
obr. 17 no.6:21 Je '60. (MIRA 13:7)

1. Zamestitel' direktora remeslennogo uchilishcha No.7, Novosi-  
birsk.

(Meteorology--Study and teaching)

GRINSHTEYN, V. Ya., inzh.; KOSTOLONOV, V. F., inzh.

Devices for finding and separating out metal at stone crushing  
plants. Stroi. mat. 8 no.9:15-17 S '62. (MIRA 15:10)

(Stone and ore breakers)

CHIPEN, G.I.; EYDUS, Ya.A. [Eidus, J.]; BOBOVICH, Ya.S.; GRINSTEYN, V.Ya.  
[Grinsteins, V.]

Structure of N-acyl derivatives of  
3-phenyl-5-amino-1,2,4-triazole. Zhur.  
strukt.khim. 6 no.1:53-57 Ja-F '65.

(MIRA 18 11)

1. Institut organicheskogo sinteza AN Latvyskoy SSR,  
Latviyskiy gosudarstvennyy universitet imeni P.Stuchki i  
Gosudarstvennyy opticheskiy institut imeni S.I.Vavilova.  
Submitted October 10, 1963.

BOSEV, A.I.; FROST, L.P. (Rodzits, G.); CHIPEN, D.I.; GRINSHTEYN, V.Ye.  
[Grinshteyn, V.]

Extraction of a complex compound of pentavalent molybdenum with  
thioglycolic acid in the presence of guanidine derivatives.  
Zhur. anal. khim. 20 no.1:76-81 '65. (M.R. 13-3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova,  
Leningradskiy gosudarstvennyy universitet imeni P. Stuchki i  
Institut organicheskogo sinteza AN Latvyskoy SSR.

GRINSHTEYN, V.Ya. [Grinsteins, V]; MEDNE, K.K.; ZAYEVA, S.P.; STOLYCO, N.S.; VEVERIS, A.P.; GERMANE, S.K.; ALBERTA, M.A.; GRIGALINOVICH, G.A.; TEMERE, V.A., ZELCHA, S.B. [Zelca, S.]

Tuberculostatic properties of mixed thiosemicarbazone guanylhydrazone 1,3-indandione, a representative of a new type of antitubercular substances. Dokl. AN SSSR 147 no.5:1083-1095 D '62. (MIRA 16:2)

1. Institut organicheskogo sinteza i Institut eksperimental'noy i klinicheskoy meditsiny AN Latvyskoy SSR. Predstavleno akademikom A.N. Nasmeyanovym.

(TUBERCULOSIS) (ANTIBIOTICS) (KETONES)

GILLER, S.A., akademik; BAUMANIS, E.A.; SOKOLOV, G.P.; GRINSHTEYN, V.Ya.

Synthesis and antimonamine oxidase activity of alkyl hydrazides of  
3-pyridazine carboxylic acid. Dokl.AN SSSR 145 no.2:440-442 J1  
'62. (MIRA 15:7)

1. Institut organicheskogo sinteza AN Latvyskoy SSR. 2. Akademiya  
nauk Latvyskoy SSR (for Giller).

(Amine oxidase) (Hydrazides) (Pyridazinecarboxylic acid)

GRINSHTEYN, V.Ya.; RATENBERG, N.S.; MOROZOVA, T.N.

Data of an experimental and clinical study of transamine, a new monoamine oxidase inhibitor. Zhur.nevr. i psikh. 62 no.12: 1806-1812'62 (MIRA 16:11)

1. Institut organicheskoy khimii (dir.-akademik S.I. Giller)  
AN Latvyskoy SSR i kafedra psikhiatrii (zav. - prof. A.V. Snezhnevskiy) Tsentral'nogo instituta usovershenstvovaniya vrachey.

\*



CHIPEN, G.I. [Cipens, G.]; GRINSHTEYN, V.Ya. [Grinsteins, V.]

Derivatives of aminoguanidines and their transformations.  
Part 4: Derivatives of 1-alkyl-1-aminoguanidines and  
1-alkyl-3-substituted 1,2,4-triazoles. Zhur.ob.khim.  
32 no.11:3811-3817 N '62. (MIRA 15:11)

1. Institut organicheskogo sinteza AN Latvyskoy SSR  
(Guanidine) (Triazole)

CHIPEN, G.I. [Cipens, G.]; GRINSHTEYN, V.Ya. [Grinsteins, V.]

Derivatives of aminoguanidine and their transformations.

Part 3: Acyl and azomethine derivatives of aminotriazoles.

Zhur.ob.khim. 32 no.2:460-464 F '62. (MIRA 15:2)

1. Institut organicheskogo sinteza AN Latviyskoy SSR.  
(Triazole)

CHIPEN, G.I. [Cipens, G.]; GRINSHTEYN, V.Ya. [Grinsteins, V.];  
PREYMAN, R.P. [Preimans, R.]

Derivatives of aminoguanidine and their transformations.  
Part 2: Derivatives of nitroamino- and diaminoguanidines  
and their transformations. Zhur.ob.khim. 32 no.2:454-459  
F '62. (MIRA 15:2)

1. Institut organicheskogo sinteza AN Latvyskoy SSR.  
(Guanidine)

GRINSHTEYN, V.Ya. [Grinsteins, V.]; VEVERIS, A.P.

Monoguanyl hydrazones and certain mixed guanyl hydrazones-thio-  
semicarbazones of  $\beta$ -diketones exhibiting a tuberculostatic effect.  
Zhur.ob.khim. 32 no.4:1077-1084 Ap '62. (MIRA 15:4)

1. Institut organicheskogo sinteza AN Latvyskoy SSR.  
(Hydrazones) (Semicarbazones) (Ketones)

GRUNSHTEYN, V. Ya.; CHIPEN, G.I.

Derivatives of aminoguanidines and their conversions. Part 1:  
Synthesis of acylaminoguanidines and 3-substituted 5-amino-1,  
2,4-triazoles. Zhur. ob. khim. 31 no.3:886-890 Mr '61.  
(MIRA 14:3)

1. Institut organicheskogo sinteza AN Latvyskoy SSR.  
(Guanidine) (Triazole)

GRINSHTEYN, V. Ya        In Latvian

GRINSHTEYN, V. Ya. -- "Dependence of Polyploid Activity and Functions of Myotic Poison on the Chemical Structure and Increase in the Number of Alkaloids in the Polyploid Forms of Stramonium." Latvian State U, 1948. In Latvian (Dissertation for the Degree of Candidate of Chemical Sciences)

SO: Izvestiya Ak. Nauk Latvyskov SSR, No. 9, Sept., 1955

L 45832-66

ACC NR: AP6030580

whose outputs are connected with the relay unit input, and the inputs are connected with the shunts set up in the lines to be controlled. Orig. art. has: 1 figure. [DW]

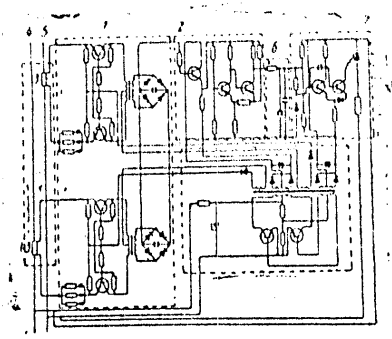


Fig. 1. Contactless overload relay.  
1—Two transistorized balanced amplifiers; 2—relay unit; 3—shunts; 4 and 5—controlled lines; 6—R-C circuits; 7—output unit with electromagnetic slave mechanisms

SUB CODE: 09/ SUBM DATE: 21Jun65/

Card 2/2

L 15832-66 EWT(1)

ACC NR: AP6030580

SOURCE CODE: UR/0413/66/000/016/0062/0062

INVENTOR: Grinshteyn, V. I.; Nudel'man, V. N.; Ol'nov, V. M.

ORG: none

TITLE: Contactless overload relay, Class 21, No. 184957 [announced by Chuvash Scientific Research Institute of Electrical Engineering (Chuvashskiy elektrotekhnicheskij nauchno-issledovatel'skiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 62

TOPIC TAGS: contactless relay, overload, RC circuit, transistorized balanced amplifier

ABSTRACT: The proposed contactless overload relay utilizes semiconductors and contains an input relay unit, R-C circuits with an adjustable delay, and an output unit using electromagnetic slave mechanisms. To divide the controlled heteropolar lines galvanically and thus insure relay sensitivity to the overloads of both polarities, the relay contains two transistorized balanced amplifiers

Card 1/2

UDC: 621.316.925.43:621.315.592



ACC NR: AP01391

Orig. art. has: 5 figures and 7 formulas. (all)

SUB CODE: 09 / GUM DATA: 15Aug64 / ORIG REF: 001 /

Card 2/2

ACC NR: 1163-1167

AUTHOR: Bocharyov, Boris Vasilyevich, Senior Research Engineer  
Vladimir Illich (G.I.I.I.F. Senior Research Engineer)  
 (Senior research engineer)

ORG: Glavash Electrotechnical Scientific Research Institute  
 elektrotekhnicheskii nauchno-issledovatel'skiy institut

TITLE: Thyristor operation in circuits with active-inductance

SOURCE: Izvestiya vyzobikh i izobreteniy, Moscow, 1967, No. 11  
 1163-1167

TOPIC TAG: Thyristor operation in circuits with active-inductance

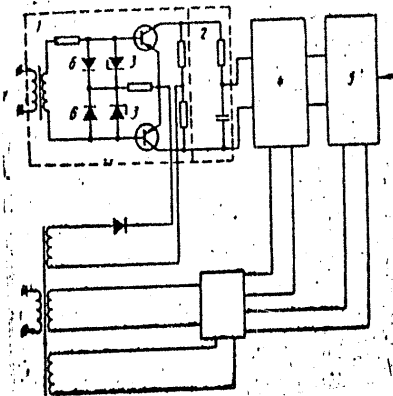
ABSTRACT: Thyristors, because of their high switching power (up to 100 W), speed (10-20  $\mu$ sec), and sensitivity (0.01-1.0 V), are presently in widespread use as substitutes for intermediate relays or in output and relay protection and automation. The authors give a brief description of thyristor characteristics, operation, associated theory, and typical circuit connections. They conclude that 1) in numerous cases of relay protection and automation circuit design one should use the pulsed thyristor with either constant or variable anode voltage; 2) during thyristor operation on active-inductance load one should take into account the resulting increase of the necessary control pulse duration; and 3) the circuits presented in the paper permit a relaxation of demands imposed usually on control elements.

Card 1/2

L 24556-66

ACC NR: AP6006336

Fig. 1. 1 - phase detector; 2 - integrating component; 3 - silicon stabilitrons; 4 - storage trigger; 5 - operating element; 6 - germanium diodes.



Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 14Dec64

Card 2/2

P.B.

L 24556-66 EWT(1)/EWA(h)  
 ACC NR: AP6006336 SOURCE CODE: UR/0413/66/000/002/0058/0058

AUTHORS: Bogoyavlenskiy, N. I.; Grinshteyn, V. I.; Ol'nov, V. M.

ORG: none

TITLE: Frequency difference relay. Class 21, No. 177987 [announced by Chuvash  
 Electrical Engineering Scientific Research Institute (Chuvashskiy  
 elektrotekhnicheskoy nauchno-issledovatel'skiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 58

TOPIC TAGS: electronic circuit, sensitivity increase, electric relay

ABSTRACT: This Author Certificate presents a frequency difference relay. The relay contains a phase detector, silicon stabilitrons for protecting the input circuits, an integrating component, a storage trigger, and an operating element (see Fig. 1). The design increases the sensitivity of the relay to the magnitude of the residual voltage of the generator. The generator is synchronized with the line supply. Germanium diodes are connected to the parallel protected silicon stabilitrons.

UDC: 621.318.57

Card 1/2

BOCHKAREV, Vadim Markisovich, starshiy nauchnyy sotrudnik;  
GRINSHTEYN, Vladimir Il'ich; SHEVTSOV, Viktor Mitrofanovich

Operation of p-n-p-n devices in circuits with active inductive  
load and impulse control. Izv. vys. ucheb. zav.; elektromekh.  
8 no.10:1163-1167 '65. (MIRA 19:11)

1. Chuvashskiy elektrotekhnicheskoy nauchno-issledovatel'skiy  
institut (for Bochkarev). 2. Nachal'nik byuro slozhnykh rele  
Chuvashskogo elektrotekhnicheskogo nauchno-issledovatel'skogo  
instituta (for Grinshteyn). 3. Starshiy inzhener-issledovatel'  
Chuvashskogo elektrotekhnicheskogo nauchno-issledovatel'skogo  
instituta (for Shevtsov). Submitted November 4, 1964.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000616900029-6

GRINSHTEYN, V.I., inzh.; LYAMETS, Ya.Ya., inzh.; POLYAKOV, G.P., inzh.

Contactless relay of active back current. Elektrotehnika 36  
no.3:29-30 Mar '65. (MIRA 18:6)

ACCESSION NR: AP4025745

S/0144/64/000/002/0259/0269

AUTHOR: Grinshteyn, Vladimir Il'ich (Chief); Shevtsov, Viktor Mitrofanovich  
(Senior research engineer)

TITLE: Controlled pnpn switches

SOURCE: IVUZ. Elektromekhanika, no. 2, 1964, 259-269

TOPIC TAGS: pnpn switch, pnpn diode, pnpn controlled rectifier, thyristor,  
thyatron transistor, semiconductor device, silicon controlled rectifier

ABSTRACT: An elementary description and Soviet-type characteristics of pnpn diodes and pnpn controlled rectifiers are given. The Soviet-make silicon power diodes and rectifiers are manufactured for 10-150 amp, 50-1,000 v. A turn-on current within 2-15 ma was measured in controlled rectifiers of 10-20-amp rated current. Switching voltages at +25, +75, and -60C are reported. A few possible applications are listed. Orig. art. has: 10 figures, 1 formula, and 1 table.

ASSOCIATION: none

SUBMITTED: 16Oct63

DATE ACQ: 16Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 008

Card 1/1

GRINSHTEYN, V.I., inzh.; SHEVTSOV, V.M., inzh.

New network of a power directional relay. Elektrotehnika 35  
no.4:62-63 Ap '64. (MIRA 17:4)



GRINSHTEYN, V.I., inzh.; HODELMAN, V.H., inzh.; MAKHEMANOV, I.A., inzh.

Negative sequence power relay. Vest. elektroprom. 34 no.8:74-75  
Ag '63. (MIRA 16:9)

(Electric relays)

GRINSHTEYN, V.I., inzh.

Transistorized frequency reducing relay. Vest. elektroprom. 34  
no.5:77-78 My '63. (MIRA 16:5)  
(Electric relays) (Frequency changers)

GRINSHTEYN, V.I., inzh. (Cherboksary); RAKHMANOV, I.A., inzh. (Cherboksary)

Transistorized current balance relay. Elektrichestvo no.10:78-  
79 0 '63. (MIR 10:11)

21823

S/105/61/000/005/002/005  
B116/B221

## Power relay from semi-conductors

consists of two bridge rectifiers, an additional resistor at the a.c. terminals, and a load resistor (responding section). The additional resistor at the a.c. terminals serves for an exact adjustment of the working and the retardation branch of the circuit. The relay is tuned by selecting the potential at the amplifier input and by adjusting the comparison circuit. The necessary angles of highest sensitivity are received by appropriate switching of the input circuit of the voltage transformer. The relay is mounted on a socket (130 by 95 mm) and provided with a casing. The total height including the socket is 145 mm. The working tests showed the following results: As far as the adjustment is concerned, the power relay from semi-conductors is much simpler than an induction relay and does not show the drawbacks of the latter. Dimensions and weight are much smaller as compared with the induction relay. The electric parameters are higher than those of the induction relay. There are 1 figure and 1 table.

SUBMITTED: April 25, 1960

Card 2/3

21823

9.2140 (1,150,1161)

S/105/61/000/005/002/000  
B116/B221AUTHOR: Grinshteyn, V. I., Engineer (Cheboksary)

TITLE: Power relay from semi-conductors

PERIODICAL: Elektrichestvo, no. 5, 1961, 70

TEXT: The test relay from semi-conductors, shown in Fig. 1, was manufactured by the Cheboksarskiy zavod (Cheboksary Works) and is at present being tested in various power systems. The relay was developed by the Teploelektroproyekt. It consists of 2 main parts: the phase-comparison circuit and the final control organ. The latter is built as a two-stage amplifier from semi-conductor triodes and a relay at the output. The phase-comparison circuit is constructed according to the principle of "circulation" of rectified currents. The relay has two transformer inputs (for current and voltage). The secondary windings of the current and voltage transformer are connected in such a way that, at the angle of the highest sensitivity at the end of one pair of windings there occurs the algebraic difference of the electromotive force, and at the end of the other pair the sum of the emf appears. The comparison circuit

Card 1/3

GRINSHTEYN, V.I. (Cheboksary)

Zero-sequence power relay with current polarization. Elektrichestvo  
no.1:81-82 Ja '61. (MIRA 14:4)  
(Electric relays)

BAUMANIS, E.; GRINSHTEYN, V. [Grinsteins, V.]

Dependence of antimonooxidase activity of derivatives of  
cyanocarboxylic acid hydrazides on their chemical structure.  
Izv. AN Latv. SSR no. 2:79-84 '63. (MIRA 16:4)

1. Institut organicheskogo sinteza AN Latvyskoy SSR.  
(Amino oxidase) (Hydrazides) (Cyano compounds)

MEDNE, K.; GRINSHTEYN, V. [Grinsteins, V.]; LAVRINOVICH, E. [Lavrinovics, E.];  
BAUMANIS, E.

Study of [the effect of] some derivatives of cyanocarboxylic acids  
on tuberculostatic activity and its dependence on the chemical  
structure of the compounds. Vestis Latv ak no.4:131-138 '62.

1. Institut organicheskogo sinteza AN Latviyskoy SSR.



GRINSHTEYN, V.[Grinsteins, V.]; MEDNE, K.; CHIPEN, G.[Cipens, G.]; VEVERIS, A.

Tuberculostatic activity of derivatives of aminoguanidine and diamino-guanidine and its correlation with chemical structure. Vestis Latv ak no.10:89-100 '61.

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

(GUANIDINE) (TUBERCULOSIS)

MEDNE, K.; GRINSHTEYN, V.[Grinsteins, V.]; CHIPEN, G.[Cipens, G.]

Study of the tuberculostatic activity of 1,2,4-triazole derivatives.  
Vestis Latv ak no.7:85-96 '61.

1. Akademiya nauk Latviyskoy SSR, Institut organicheskogo sinteza.

(TRIAZOLE) (TUBERCULOSIS)

GRINSHTEYN, V. [Grinsteins, V.] (Riga); YUKNA, R. [Jukna, R.] (Riga);  
BAUMANIS, E. (Riga)

Hydrazides of cyandicarboxylic acids and their derivatives. Vestis  
Latv ak no. 11:107-112 '60. (EEAI 10:9)

1. Akademiya nauk Latvyskoy SSR, Institut organicheskogo sinteza.

(Hydrazides) (Cyano carboxylic acids)  
(Dicarboxylic acids)

GRINSHTEYN, V.[Grinsteins, V.](Riga); SHERIN', L.[Serina, L.](Riga)

Synthesis of hydrazides of  $\alpha, \beta$ -dicyanopropionic acids and their properties. Vestis Latv ak no.10:95-100 '60. (EEAI 10:9:10)

1. Akademiya nauk Latvyskoy SSR, Institut organicheskogo sinteza.  
(Hydrazides) (Dicyanopropionic acid)

GRINSHTEYN, V.

The benzofuran series. G. Villere and V. Grinšteins, *Latvijas Valsts Univ. Kim. Fak. Zinātniskie Raksti* 22, No. 6, 129-35 (1958).—(R in this abstr. = isonicotinoyl.) 3-Oxo-2,3-dihydrobenzofuran (I) refluxed 5 hrs. with RNHNH<sub>2</sub> (II) and the unreacted material extd. from the mixt. with Et<sub>2</sub>O left the hydrazone, m. 187-8°. Similar treatment of I with NCCH<sub>2</sub>CONHNH<sub>2</sub> (III) did not give the corresponding compd., even under pressure, and I could also not be condensed in this way with H<sub>2</sub>NCSNHNH<sub>2</sub> (IV). 2-Acetylbenzofuran (V), however, could be condensed with II to the hydrazone, m. 229-30°, and III and V refluxed 5 hrs. in EtOH gave the yellowish hydrazone, m. 195-6°. If the pressure was increased so the mixt. reached 140°, V and IV condensed to the thiosemicarbazone, m. 190-4°. Similarly, 3-amino-2,3-dihydrobenzofuran-HCl and NCNH<sub>2</sub> (VI) heated 6 hrs. at 150° in EtOH in a sealed ampul and CO<sub>2</sub> passed through the mixt. gave 3-guanidino-2,3-dihydrobenzofuran carbonate, m. 150-1°. V, EtOH, AcOH, and Na-Hg at 40-50° gave 1-(2-benzofuryl)ethylamine-HCl (VII), m. 159-62°. VI and VII heated 8 hrs. in EtOH, and the mixt. treated with NaOH then CO<sub>2</sub> yielded [1-(2-benzofuryl)ethyl]guanidine carbonate, m. 102-18° (decompt.).

Werner Jachson

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42 20 31

20

GRINSHTEINS, V. [Grinsteins, V.] (Riga); BAUMANIS, E. (Riga)

N-alkyl and N-acyl derivatives of cyanoacetic acid hydrazide. Vestis  
Latv ak no.2:107-112 '60. (EEAI 10:1)

1. Akademiya nauk Latvyskoy SSR, Institut organicheskogo sinteza.  
(Alkyl groups) (Acyl groups)  
(Cyanoacetic acid) (Hydrazides)

GRINSHTEYN, V.

1  
 Derivatives of benzofuran and benzodifuran. V. Grinshteyns and V. Slavinskaya. *Latvian Valsts Univ. Kim. Mat. Zinatiskie Raksti* 22, No. 6, 110-27(1958).--Resorcinol and benzoin melted together then treated with 73%  $H_2SO_4$  and the mass extd. with  $H_2O$  and EtOH gave either 2,3,5,6-tetraphenylbenzo[1,2-b,5,4-b']difuran (I) or 2,3,6,7-tetraphenylbenzo[1,2-b,4,5-b']difuran (II), needles m. 217-18°, which with AcOH and  $HNO_3$  gave a yellow cryst. compd., not m. below 270°. Analyses showed that, depending upon the amt. of  $HNO_3$  used, 1 or more  $NO_2$  groups were substituted in the mol. Replacing in the above reaction the resorcinol by hydroquinone gave either II or 1,2,7,8-tetraphenylbenzo[1,2-b,4,3-b']difuran (III), needles, m. 287°. From the same mixt. could be isolated small amts. of 2,3-diphenyl-5-hydroxybenzo[b]furan (IIIa). Nitration of II or III with AcOH and  $HNO_3$  gave no identifiable compd. *p*-Benzoquinone with  $AcCH_3COEt$  and  $ZnCl_2$  in  $Me_2CO$  gave needles of 2,6,3,7-Me<sub>2</sub>(EtO<sub>2</sub>C)<sub>2</sub> analog (IV) of II, which with EtOH and  $N_2H_4 \cdot H_2O$  gave the 2,6,3,7-Me<sub>2</sub>( $H_2NNHCO$ )<sub>2</sub> analog, does not m. below 270°. If in the reaction for the prepn. of IV the ratio between the reactants was changed (less quinone), the product was the 2,3-Me(EtO<sub>2</sub>C) analog (V) of IIIa. IV was always formed also, but the V could be easily sepd., m. 137-8°, did not furnish a hydrazide. *p*-Quinone,  $CH_3Ac$ , and  $ZnCl_2$  in  $Me_2CO$  gave acicular crystals of the 1,2-MeAc analog of IIIa, m. 230-7°; 1,1-nitrophenylhydrazone, m. 270°. Werner Jacobson

3

2 May  
 4E 2C (y)  
 4E 3C

LATVIA/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54148

was  $C_{25}H_{21}O_8N$  (V), m. p. 234-235°C.; with  $p-NH_2C_6H_4$ .  
 $SO_2NH_2$  (in  $C_5H_{11}OH$ ),  $C_{24}H_{22}O_8N_2$  was prepared (VI),  
 m. p. 224-226°C. The activity of III, IV, V and VI on  
 Mycobacterium tuberculosis was determined in dilutions  
 from 1:100,000 to 1:500,000.

Card 4/4



LATVIA/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khiniya, No 16, 1958, 54148

with  $N_2H_4 \cdot H_2O$ ,  $C_{18}H_{18}O_4N_4$  was prepared, which product does not melt at  $250^\circ C$ ; with  $C_6H_5NH_2$ ,  $C_{20}H_{21}O_6N$  was prepared, m. p.  $122-123^\circ C$ . (from alcohol); with  $C_6H_5NH_2$ , there are formed  $C_{24}H_{21}O_6N$ , m. p.  $221-223^\circ C$ ., and  $C_{24}H_{21}O_6N$ , m. p.  $137-138^\circ C$ . (both alcohol); with  $o-C_6H_4(NH_2)_2$ ,  $C_{24}H_{22}O_6N_2$  was prepared, m. p.  $175-176^\circ C$ .; with  $p-NH_2C_6H_4COOH$  (in  $C_5H_{11}OH$ ),  $C_{25}H_{21}O_8N$  (OV) was prepared, which product does not melt at  $250^\circ C$ ., also fromed

Card 3/4

29

LATVIA/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

G.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54148

hours with liquid ammonia, there is formed a mixture of products which probably are II and the diamide of I,  $C_{18}H_{18}O_5N_2$  (III). The condensation of I with diphenyl

hydrazine in alcohol (boiled for 2.5 hours) probably resulted in the formation of bis-diphenyl hydrazone of I,  $C_{42}H_{36}O_5N_4$ ; this material does not melt at 250°C.

It was not possible to prepare the corresponding amines by the reduction of the above compound (or the reduction of II, or the oxime of I).

When alcoholic solutions of nitrogen-containing compounds are boiled with I, condensation products are obtained (given are: the starting material, the composition of the reaction product, and its melting point in °C);

Card 2/4

GRINSHTEYN, V.

G.

LATVIA/Organic Chemistry - Natural Compounds and Their  
Synthetic Analogs.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54148

Author : Villere G., Grinshteins V., Kalninya E.

Inst : Latv. University.

Title : Investigation of Usnic Acid and Its Derivatives.

Orig Pub : Uch. Zap. Latv. un-t, 1957, 14, 63-78.

Abstract : The isolation of (+)-Usnic acid (I) was made from the  
Usnea Ramalina and the Gladonia varieties of lichens;  
the concentration of I in Usnea hirta is as high as  
3.8%. Usnamide (II), m. p. 251°C. (from acetic acid),  
was prepared by boiling I with ammonium hydroxide in  
a mixture of alcohol and benzene, or acetic acid plus  
sodium acetate. When I is heated at 80°C. for thirty  
minutes, or at 20°C. for thirty minutes to forty-eight

Card 1/4

25

USSR/Microbiology. Antiviosis and Symbiosis

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57550

Abstract : 1 as well as of the derivatives of 1 which retained their beta-triketone grouping inhibit the process of phosphorilization in the cells of *Saccaromyces cerevisiae* and arrest the growth of tubercular bacteria. The authors assume that the effect of substances of the type of beta-diketones and beta-triketons on tubercular microbacteria is based on the inhibition of phospholirization in the cell.

Card 2/2

USSR/Microbiology. Antibiosis and Symbiosis

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57550

Author : Grinshteyns V., Validshteyne E.

Inst : Latvian University

Title : Investigation of the Mechanism of the Antibiotic Action of Usnic Acid and its Structurally Related Derivatives

Orig Pub : Zinatn. raksti. Latv. iniv., Uch. zap. Latv. u-nt. 1956, 9, 155-157

Abstract : Usnic acid (1), with a melting point of 197 to 198°,  $[\alpha]_D^{25} = + 471^\circ$ , obtained from Usnea hirta in concentrations of  $1.6 \cdot 10^{-3}$  to  $1.6 \cdot 10^{-5}$  inhibits the activity of the blood peroxidase, but does not affect the activity of catalase, urease, tyrosinase, and lipase. A solution of

Card 1/2

1. GRINSTEYNS, V., LAZDINA, V.
2. USSR (600)
4. Isomerism
7. Investigation of isomeric forms of linoleic and linolenic acids in the natural state, obtained from hempseed oil. Latv.PSK Zin Akad. Vestis No. 8 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Incl.

GRINŠTEINS, V.

Hydroxamic fatty acids and their significance in the analysis of fatty oils. Latvijas PSR Zinātņu Akad. Vēstis '49, No.2, 65-80. (MLRA 4:1) (CA 47 no.19:10247 '53)

GRINSHEYN, V.

Verbatim: - "The separation of highly unsaturated fatty acids from hemp seed oil,"  
Izvestiya Akad. nauk Latv. SSR, 1948, No. 12, p. 59-67, (In Latvian, resume in  
Russian), Bibliog: n. 66

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)



ILLEGIBLE

STEPIN, B.D.; GRINSHTEYN, S.A.

Production of tin dichloride by the direct chlorination of the  
metal. Khim.prom. no.1:46-51 Ja '61. (MIRA 14:1)  
(Tin chloride)

GRINSHTEYN, S.A.

STEPIN, B.D.; GIL'DENBLAT, I.A.; GRINSHTEYN, S.A.

Accelerating the process of copper sulfate production.

Khim.prom. no.3:175-176 Ap-May '57. (MLRA 10:7)

1. Gosudarstvennyy soyuznyy khimicheskiy zavod im. Voykova.  
(Copper sulfate)

GRINSHTEYN, S. A.

1. National heat utilization in copper sulfate manufacture.  
 By D. Stern, I. A. Gildenblat, and S. A. Grinshteyn.  
 From 1956, 303-6. A heat balance was calcd. for  
 CuSO<sub>4</sub>·5H<sub>2</sub>O production from Cu granules dissolved in  
 H<sub>2</sub>SO<sub>4</sub> + CuSO<sub>4</sub> soln. at a temp. of 85°, produced by the  
 soln. of Cu and moderated by an airblast, which cooled  
 the Cu to the cubic state. Heat can be saved by a reuse  
 of part of the air, which is heated to 80° when leaving the  
 pan, and packing the crystals from the centrifuge, cooled  
 under 5% moisture without adding drying.

V. M. Sternberg

GRINSHTEYN, N.Ye.

Stages of sinking centrifugal pumps with open rotor wheels.  
Mash. i nef'. obor. no.2:17-19 '64. (MIRA 17:8)

1. Obshchestvennoye konstruktorskoye byuro po besshtangovym  
nasosam.

GRINSHTEYN, N. Ye.

Effect of the axial gap on the characteristics of the stages of  
sinking centrifugal pumps with open rotor wheels. Mash. i نفت.  
obor. no.11:3-6 '63 (MIRA 17:7)

1. Obshchestvennoye konstruktorskoye byuro po besshtangovym na-  
sosam.

GRINSHTEYN, N.V.; DAVYDENKO, Yu.A.; SERGEYEV, O.P.; TIMESKOV, V.A.

Position of Bakal siderites in the enclosing rocks. Izv. AN SSSR.  
Ser. geol. 25 no.7:95-98 J1 '60. (MIRA 13:10)  
(Bakal region--Siderite)

ACC NR: AP6025989

Table 1. Antibacterial activities of tertiary salts

No.	Compound	Toward e. coli	Toward staph. aureus
I	$[(C_2H_5)_3N-CH_2PO(OC_2H_5)_2]Cl$	0.5% 20 min.	0.5% 15 min.
II	$[(C_2H_5)_3N-CH_2PO(OC_2H_5)_2]Cl$	0.5% 30 min.	0.25% 20 min.
III	$[(C_2H_5)_3N]_3PCl$	1% not active	1% not active
IV	$[(C_2H_5)_3N]_3PBr$	1% not active	1% not active
V	$[(C_2H_5)_3N]_3PI$	1% not active	1% not active
VI	$[(HOCH_2)_3P]Cl$	1% not active	1% not active
VII	$[(HOCH_2)_3P]Cl$	1% not active	1% not active
VIII	$[(HOCH_2)_3P]Cl$	1% 20 min.	1% 20 min.
IX	$[(HOCH_2)_3P]Cl$	1% 45 min.	1% 45 min.

\* R is a mixture of  $C_{10}H_{22}$ ,  $C_{17}H_{36}$ ,  $C_{18}H_{38}$ .

Orig. art. has: 1 table.

[W.A. 50; CBE No. 10]

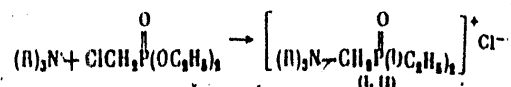
SUB CODE: 0706/SUBM DATE: 29May65/ ORIG REF: 005/ OTH REF: 001

Card 3/3



ACC NR: AP6025989

diethyl chloromethylphosphonate with tertiary amines at 120–150° yielded diethyl dimethylaminomethylphosphonate ethochloride (I), mp 179°C, and diethyl dimethylaminomethylphosphonate ethochloride (II), mp 178°C:



At 130°, decyl chloride reacts with phosphorous hexaethyltriarnide to form phosphonium salt III, mp 217°C (see table). Compounds IV and V were obtained under similar conditions. At 160° in nitrogen atmosphere, tri(hydroxymethyl)phosphine reacts with cetylphosphonium bromide or octadecyl phosphonium bromide to form the corresponding bromides (VI). The reaction of tri(hydroxymethyl)phosphine with decyl chloride at 180°C gave VII and with octadecyl chloride under similar conditions yielded VIII. Composition and bactericidal activity of the new compounds are shown in the table.

Card 2/3

ACC NR: AP6025989

SOURCE CODE: UR/0079/66/036/037/1244/1246

AUTHOR: Divinskaya, L. P.; Limanov, V. Ye.; Skvortsova, Ye. K.;  
Putyatina, G. M.; Starkov, A. V.; Grinshteyn, N. I.; Nifant'ev, E. Ye.

ORG: Central Scientific Research Disinfectant Institute (Tsentral'nyy  
nauchno-issledovatel'skiy dezinfektsionnyy institut)

TITLE: Search for bactericidal preparations among organophosphorus  
compounds

SOURCE: Zhurnal obshchey khimii, v. 36, no. 7, 1966, 1244-1246

TOPIC TAGS: bactericide, <sup>organic</sup> ~~organophosphorus~~ compound, organophosphonum  
chloride, alkylaminophosphonate chloride

ABSTRACT:

In a search for new bactericides, eight new organophosphorus compounds were  
synthesized and their bactericidal properties studied. The reaction of

Card 1/3

UDC: 547.271

ACC NR: AM6021848

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SUB CODE: 09/ SUBM DATE: 04Jan66/ ORIG REF: 048/ OTH REF: 010/

Card 4/4

ACC NR: AM6021848

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ACC NR:AM6021848

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ACC NR: AM6021848

Monograph

UR

Grinshteyn, M. M.; Kuchikyan, L. M.

Photoelectric concentration meters for automatic control and regulation (Fotoelektricheskiye kontsentratory dlya avtomaticheskogo kontrolya i regulirovaniya) Moscow, Izd-vo "Mashinostroyeniye", 1966. 170 p. illus., biblio. Errata slip inserted. 4000 copies printed.

TOPIC TAGS: photoelectric cell, radiation detector, photoresistor, photometer, light modulation, refractometer, polarimeter, *Automatic Control Device*

PURPOSE AND COVERAGE: This book is intended for technical personnel concerned with the automation of industrial processes and may also be useful to students at higher schools of education specializing in the field of automation. The principles of designing circuits for photoelectric concentration meters are discussed, and a description is given of the elements of these circuits. In addition, the theory and methods of determining the concentrations of liquid and gaseous media by means of automatic photoelectric devices are covered. Soviet and foreign photoelectric concentration meters for automatic control and regulation are described in detail.

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UDC: 621.383.4

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Instrument for measuring and regulating the concentration of FKMI-1  
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